Name Key Date

291 Review Assignment

Remember, the quiz will be on Sections 3.1, 3.2, 3.5, graphing planes, and finding the coordinates of points.

- Find the coordinates of points in 3 space
- Graph planes in 3 space
- Solve systems by graphing
- Solve systems by elimination or substitution
- Three variable systems
- Word problems (both 2 and 3 variables)
- Vocabulary
  - Consistent/inconsistent
  - Dependent/independent

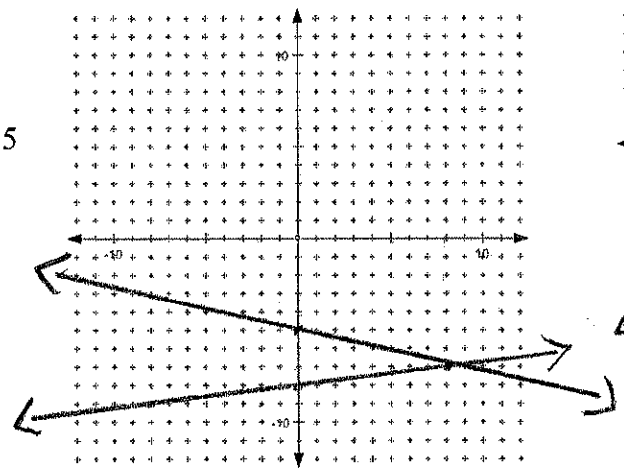
Assignment:
Do the problems on this sheet as well as the problems listed below:
p. 145-148 #s 13, 15, 18, 26
p. 143 #s 25-27
p. 121 #s 48 & 49

You may do the work on this sheet. Graphs are provided for first problem & 13.

0. Do this first: **Graph** to solve.

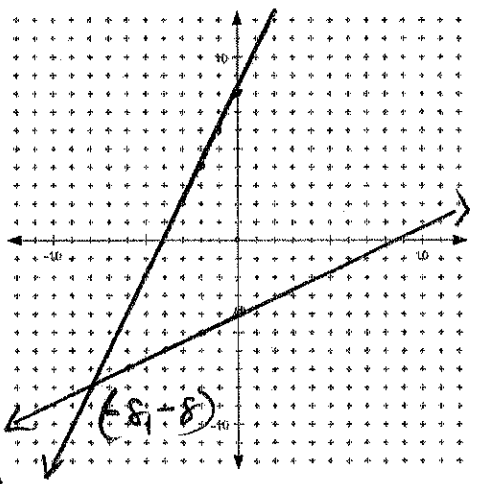
$y = \frac{1}{8}x - 8$

$y = \frac{-1}{4}x - 5$



(8, -7)

13.

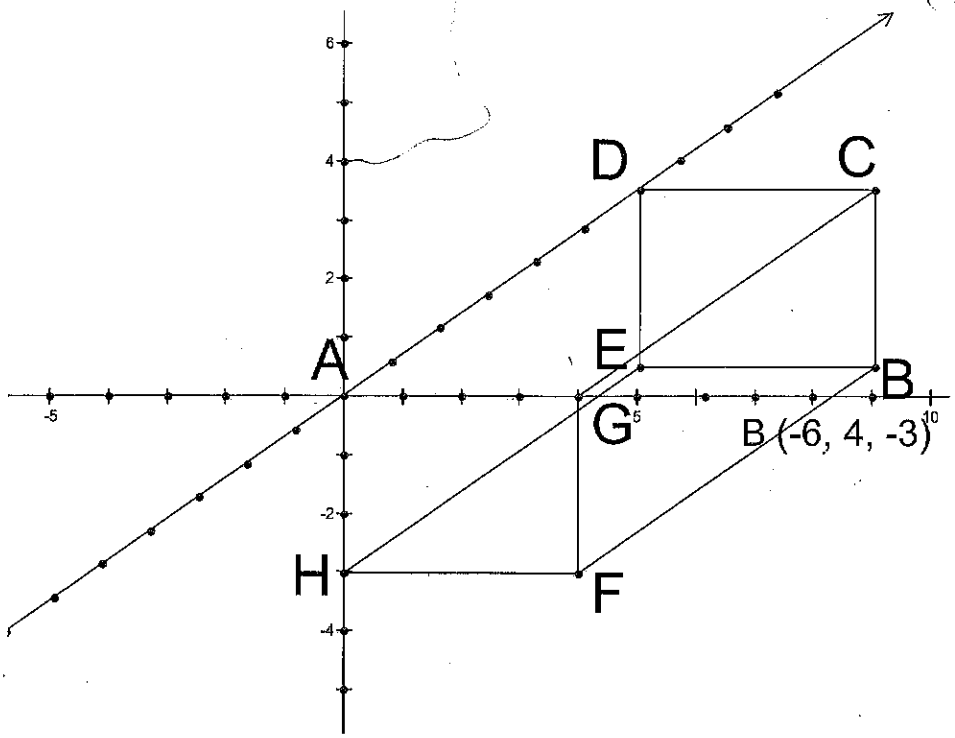


$y = 2x + 8$

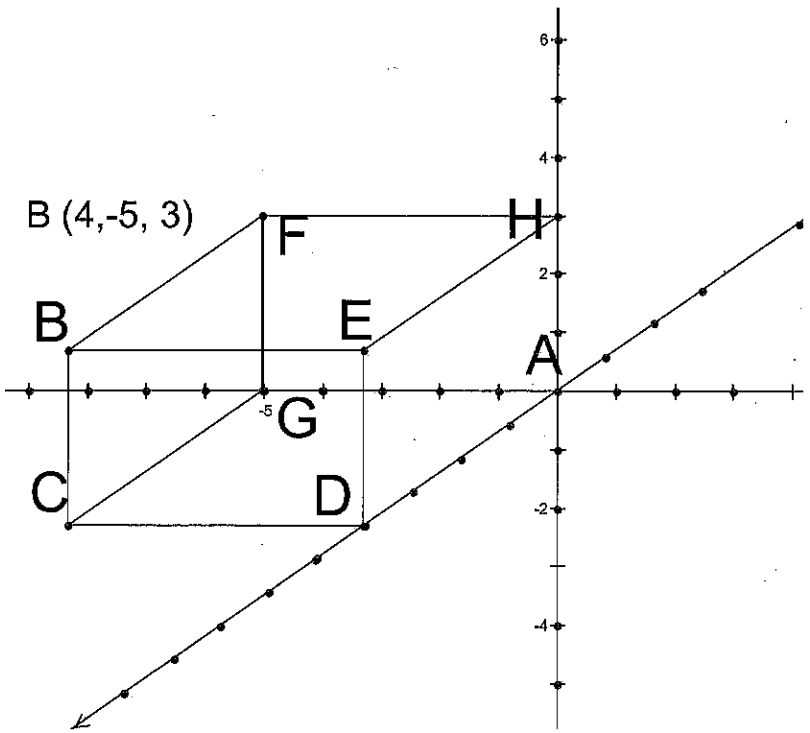
$y = \frac{1}{2}x - 4$

Determine the coordinates of the following points.

1. 0, 0, 0 A
2. -6, 4, 0 C
3. -6, 0, 0 D
4. -6, 0, -3 E
5. 0, 4, -3 F
6. 0, 4, 0 G
7. 0, 0, -3 H



8. (0, 0, 0) A
9. 4, -5, 0 C
10. 4, 0, 0 D
11. 4, 0, 3 E
12. 0, -5, 3 F
13. 0, -5, 0 G
14. 0, 0, 3 H

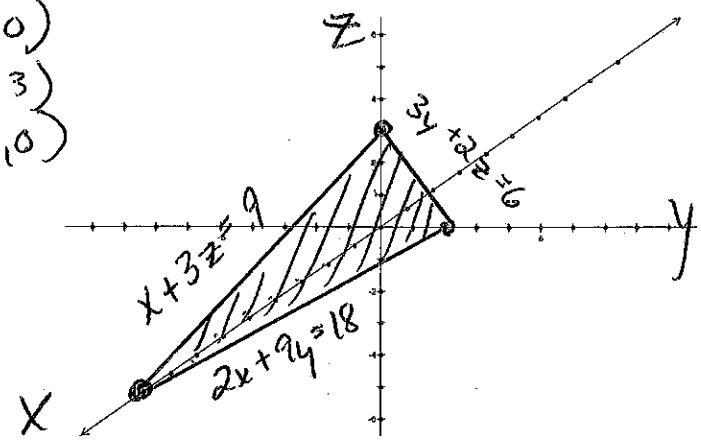


Graph the following equations:

(Give the equations of the traces for #s 1-4)

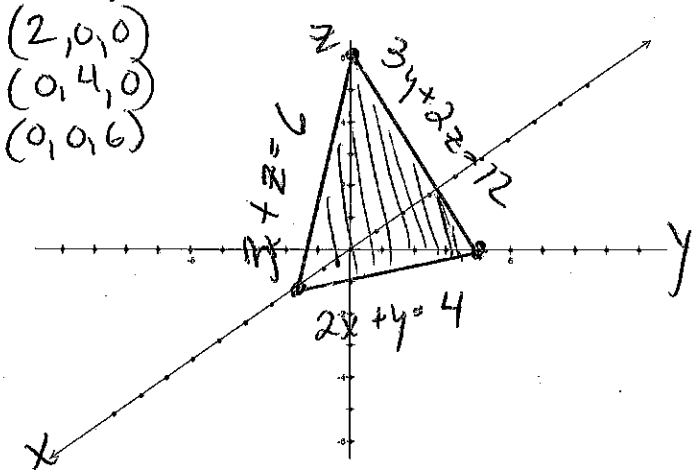
1. $2x + 9y + 6z = 18$

(9,0,0)
(0,0,3)
(0,2,0)



2. $12x + 6y + 4z = 24$

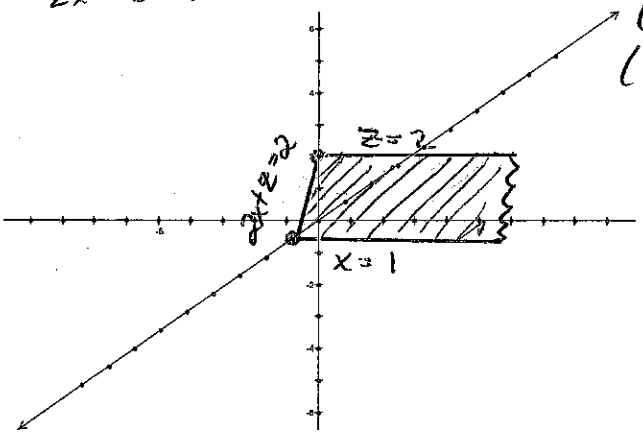
(2,0,0)
(0,4,0)
(0,0,6)



3. $10x + 5z = 10$

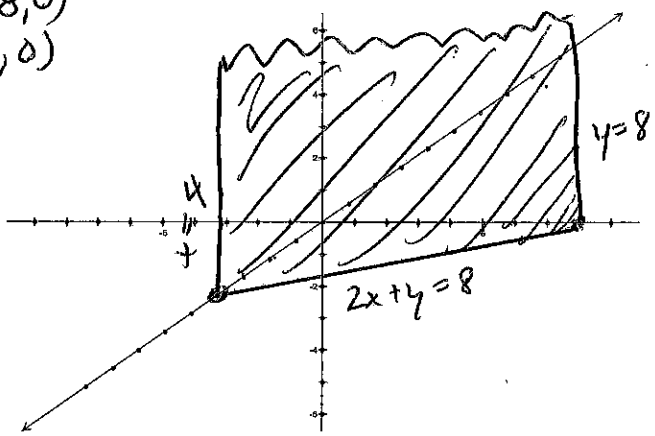
$2x + z = 2$

(1,0,0)
(0,0,2)



4. $2x + y = 8$

(0,8,0)
(4,0,0)



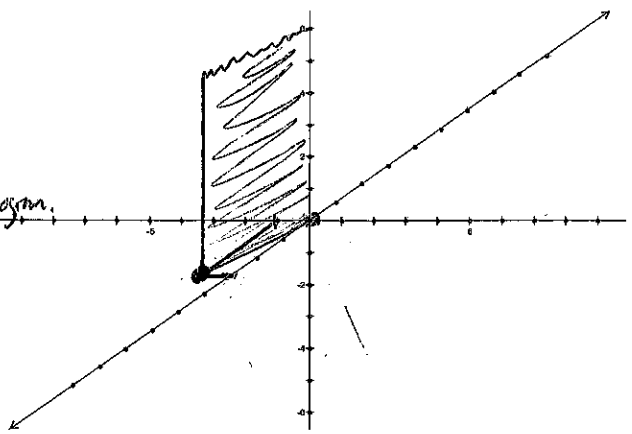
Choose a point that works!
(Begin w/ opposite coordinates)

5. $x + 3y = 0$

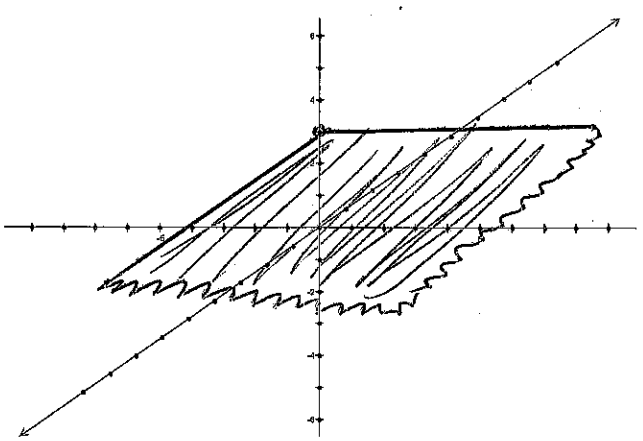
(0,0,0)
(3,-1,0)

↓

To plot this make a parallelogram.



6. $z = 3$



15. $x+y=5$
$2x-y=4$

$3x = 9$

$x = 3$

$y = 2$

$(3, 2)$

18. $-2x-6y=0 \rightarrow x=-3y$

$3x+11y=4$

$3(-3y)+11y=4$

$-9y+11y=4$

$2y=4$

$y=2$

$x=-6$

$(-6, 2)$

26. $x+4y-z=6$

$3x+2y+3z=16$

$2x-y+z=3$

Eliminate z w/ eqn's ① & ③

$x+4y-z=6$

$2x-y+z=3$

$3x+3y=9 \rightarrow x+y=3$

Now ① + ②

$3x+2y+3z=16$

$3x+12y-3z=18$

$6x+14y=34$

$3x+7y=17$

$y=3-x$

$3x+7(3-x)=17$

$3x+21-7x=17$

$-4x=-4$

$x=1$

$(1, 2, 3)$

25. $x+y+z=12$

$x=2(y+z)$

$z=x-5$

Substitution

$x+y+x-5=12$

$2x+y=17$

$-2x-4y=-20$

$-3y=-3$

$y=1$

$x=2(y+x-5)$

$x=2y+2x-10$

$x+2y=10$

$(8, 1, 3)$

26. $20x+50y+100z=370$

$2x+5y+10z=37$

$x=2y$

$x+y+z=10$

Substitute

$2(2y)+5y+10z=37$

$9y+10z=37$

$-9y-3z=-30$

$7z=7$

$z=1$

$x \rightarrow \$20$ checks

$y \rightarrow \$50$ checks

$z \rightarrow \$100$ checks

$2y+y+z=10$

$3y+z=10$

1 $100
3 $50
6 $20

$(6, 3, 1)$

27. $2T+1B=6.55$

$1E+1T+1B=7.10$

$2E+2T=8.90$

$2E-2T=1.10$

① + ② subtract

$1E-1T=.55$

$\times 2$

$4E=10.00$

$E=2.50 \quad T=1.95 \quad B=2.65$

48+49 a - aerobics, s - stretching

48. $a+s=40$

$11a+4s=335$

49. $11a+4(40-a)=335$

$160-4a$

$7a=175$

$a=25 \quad s=15$